

ANT/SHE/04

WS

HERIATON

0043

ENDERBY

LAND

1977

②

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Subject

24/1/77 Cont

Mt Cor R 4, 0995

Gage Ridge 11 (E of 4 mths)

① massive reddish chloritic gneiss with garnet.

Pod of white ? cordierite with irregular schlieren of phlogopite / sapphirine. A' margins of same layers, of coarse grained ? hypersthene / sapphirine etc. occurs - the sapphirine becomes dark blue (50 rich), hypersthene is deep brown and ? quartz & feldspar are present. 1. pale sapphirine may be associated with cordierite in the main part of the pod

4337 Massive garnet gty feld gneiss

4338, 9 white cordierite / sapph / phlog

4340 phlogopite / sapphirine

4341-3 margins of pod with dark sapphirine / hypersthene / feld / quartz (pegmatitic)

① Sage Ridge . E (near dyke)

Mt. God R.S., 1074

Dep 270/23

Well layered gneiss —

4342 a/g/s felsic pyroxene gneiss,
aluminous metacasts, ^{blue} quartzite etc.

The garnet gneiss (a/g/s - rich) and
bluish-grey quartzite have thin
conformable layers of sapphirine/
garnet/cellulose, etc.

Local schistosity and
deformation. (particularly along
dolerite dyke margin)

Reorientation 210/15

Dyke trend 200 (steep)

4344 Dolerite

4345 mafic pyroxene gneiss

4346 Plagioclase pyroxene gneiss

4347 (2 spec). blue striae ~~etc~~ with
gan/sap/cell layers

4348-50 Aluminous gneiss

with gan/cell/sapp etc

② Cape Ridge St. and

- 4351 fawn to brown green (faded)
- 4352 massive chocolate green

St. (aged) 20% old green (green
 grey to white) ^{high pressure}
 green! etc ^{no} luminous

insects noted. Dolomite dyke (1m)
 beds 2400. Some retrogression
 locally, with extreme separation -
 11 St. Heavy (apparently conformable)
 with limestone (2000') The
 green adjacent to the dyke
 is ^{is} identical with that in
 and retrogressed ^{green} also tends
 to be pale in color

4351 fawn to brown green
 4352 massive chocolate green
 4353 massive green

Dip ~ 260/20

25/1/77

Baro M6 Kurj

10.45 am

510

985

-9°C

267.95

268.02

N Ntk on NW side of Wyers Ice Shelf

• Impression PK P10,0028

① Eclogite (2 pyroxene garnet prot)

Coarse grained

Eclogite prot 4353

4354 2 pyroxene garnet pelagic rock

4355 Sapphirine / ^{near} phlogopite / garnet
rock from margin of prot

4356 Pyroxenite

Quartz rocks or quartz / feldspar gneiss
(well layered) with pyroxene and/or
garnet. Also mafic pyroxene gneiss
(some with garnet) and pyroxenite.

Similar to Tongat Island

~~Exp 2085/30~~

Zubchaty's Ice Shelf

Simpson PK R7, 1268

Spot Height 213 (N of 2 Niles N of

① Tyne Hills)

mostly rather massive reddish gneiss

Dip $\sim 30^\circ$ to ~~45~~ 25a (estimate only)

Cut by dolerite dyke. (240' East)

rather sheared and possibly

altered. Country rocks include

eclogite (clinopyroxene/garnet etc)

4357 Dolerite dyke

4358 massive reddish brown gneiss

with possible graphite

4359 Eclogite

Ward Rock (E end)

Reddish rather massive pyroxene qtz feld

gneiss and garnet quartz feldspar gneiss

Some minor pyroxene gneiss and

magnetite rich rocks.

Ultramafic zone contains ~~little~~ no
garnet (~~eclogite~~ eclogite?). No.

4360 massive ultramafic gneiss

4361 ~~??~~ pyroxenite (? eclogite)

26/1/77

McLeod/Proc ISR 12, 2340

Mc McGhee - W ends on top.

- ② Mod layered to massive reddish
greens - much massive chamoisite
pyroxene gln, feld, quartz
with some massive in places
a little mafic green and some
massive grey quartzite layers (not
in block. 1-3m)
Cut by dolerite dyke (apparently
fresh.
4362 Dolerite dyke

Mc Renouard
ridge

Saddle see on p
McLeod MCR 11, 2358

- ①
Rocks, well layered, red pyroxene gln
with blue gln, feld, quartz
and layers of red mafic
mafic and ultramafic green etc
Cut by dolerite dyke which appears
to be rather altered (see photomicrograph)
Up above saddle is 040/15

4363 *Volcanic dyke (altered)*

- ③ N of saddle - strongly layered
leucocratic, garnet qtz feld gneiss, massive
rod clonoclastic gneiss, some almost
spotted layers and phoscorite gneiss
- Rsp ~ WORTH (see memo)

4364 massive leucocratic gneiss

The probably came out from a different
disseminated in the matrix
deformed of a phoscorite structure is
present in the matrix (see memo)

NK 4mbs. SW of Mt Renouard

- ④ Steeply dipping (310/80) well layered
leucocratic gneiss, feld gneiss
with some qtz schlieren and layers
and granitic structure + massive
gneiss (see memo) + presence of
feldspar gneiss + some large phoscorite
gneiss and feld-schlieren gneiss

Similar to Renouard de

The layered gneiss is folded

with light to rochmal metabasals
and micro-schist folds, bounding
structures etc

4365 massive charnockitic gneiss
gneiss

Some of the garnet - pyroxene gneiss
has pale brownish spots of
qtz. The gneiss is rather
banding in a small scale rather
irregular

Sand R/2315

Sandercock Ntk - 5 Ntk

①

Baro	185	510	17.38
	753.58	753.45	-12°C

Reddish weathering, coarse grained
porphyritic leucite granite.

Microspar or white on local surface
(2 ft up in Sand. (low - low))

Basite occurs in aggregates - somewhat
similar to granite at Mt. Bride

A slightly finer grained variety =

∞

reddish and has a speckled appearance in outcrop.

Xenoliths are present but are not abundant and strongly sheared and mylonitized - present locally.

4366 Reddish biotite granite

4367 White, coarse grained

granite with biotite granite.

Yonkers 1916

Santa RB / 2324

Bar 1 510

985

18 38

753-18

75310

-14°C

biotite

⑤ Mainly granite, similar to last locality - but much deformation locally - extreme shearing (mylonization) -

angular grains and sh. foliated granite. Most of the area is more or less deformed. Color is white

to reddish

Thin pink aplite

5-15 cm /
thin and

white biotite megacrysts (15 cm)

and intense deformation.

6

- 4368 foliated, porphyroitic biotite
gneiss
4369 Augen gneiss (strongly
deformed - insect biotite)
4370 Kyanite vein

The deformed rocks have a marked
lineation. In the Augen gneiss
the lineation is composed of a
series of small, rounded, brown biotite
inclusions all present.

main NCK

③	<u>20002</u>	985	510	20.28
		745.62	745.52	-16°C

V. massive, but foliated ^{and} garnet
biotite gneiss. Much of ~~porphyroitic~~
porphyroitic (folded biotite) biotite
up to 1 cm in length.
A little ~~green~~ garnet ^{garnet} is also present.

⑥ The small hill to the ESE &

by similar very massive green
granite suitable for

4371 for heat green (small site)

4372 for heat green (main site)

The green is very massive and
may be in tension, we may have
been subjected to the nearby
granite intrusions. Are the
gold-silver part deformation or too
deformation? - they look the same as
is(?)

27/1/77

Simpson Pl R 7, 1268

Khmara Bay

NE group of NTKS - N point

②

Med. Well layered acid to basic pyroxene
green (the ground seen) + minor
pyroxenite.

Dips at W side of outcrop 190/vert
(100 strike), at E side of outcrop - 210/80

The pyroxene green has some pyroxenitic
character (p. 50 of 3 fold), but there is
not very much change of grain size
with pyroxene content. The more
mafic layers are more homogeneous,
and also paired than the acid layers.
The greens are cutting a dolerite
dyke trend $\sim 240^\circ$

4373 Dolerite dyke

4374 Acid pyroxene green (2 pieces)

4375 mafic pyroxene green

Simpson Pl R 7, 1270

① SE group of NTKS - just W of base dome

V massive red pyroxene gty fld' green
with some mafic pyroxene layers, and also

magnetite-rich sand.

The gneiss is mobilized with
a diffuse banding and some thin
blocks. Population segregation
(@ full part) are very common and are
highly conformable.

A dolerite dyke is discordant
to the deformed and is a well exposed
locally, it is layered, with the more
leucocratic layers and schlieren.

Gneiss is locally present. The
large dome is a granite intrusion
(possibly charnockitic - brown color)

A grey granite also appears to
be intrusive, but relations are
very clear - in some places it
appears to grade into the country
rock. A ^{small} amount of similar material
is present in the latter region.

Both granites are undeformed.

Loc. 371 to 411 dome is 01/70,
further to SW it is 35°/10

4376 massive charnockitic granite

" 377 grey granite (could be
an altered phase of above)

- 4378 massive pyroxene & 1/2 feld glass
 4379 Metamorphosed dyke (epid & granule)
 4380 M/m dyke with pyrox.

A ^{green} large undeformed α pyroxene α feld.
 with pyroxite - 3" across -
 present (fild. from W to 15cm)

② W of 3 islands, 3 mls to W

V mafic 2 pyroxenes - big green -
 low leucocrate (pyroxite & old granule)
 veins. Green in massive
 rather irregular lamination - a
 few pyroxite lenses as shown &
 garnet occurs locally, mostly
 along veins (10cm or across) -
 possibly an alteration (or deformation)
 effect.

- 4381 2 pyroxene mafic green
 4382 mafic pyroxene greenish
 green.

Islands to W

Simpson Plk RS, 1438

moderate level pyroxene green (of
the Kilmore Bay N.W. to 75.00 J.C.)

Keep deep

- ① No. 3 main island is layered and has pyroxene green, with some coarse grained pyroxenite gneiss, etc., (old type gneiss (rather well developed in some areas))

One mafic green layer could be a mafic dyke, but is not so discordant. It is very massive, however. A massive charnockitic pyroxene gneiss is also common.

2 Pyroxene (green dyke, known as pyroxenite) - lenses are present in the green

Dip N 40° E 80°

4383 Pyroxene green

4384 massive charnockitic gneiss

4385 mafic pyroxene green

4386 Pyroxenite

Cons cutting shear zone, and faults are very common here. They are mostly of quite a high angle to the landward

② Island NW of large island

Local basaltic gneisses, 1. Similar
to Target Is — massive pyroxene
gneiss, layered pyrox gneiss, white
pyroxene gneiss, calcic ortho layered
gneiss, local layered calc pyroxene
gneiss (possibly not knolls)

Pyroxene pods all present.

Also contains dolerite dyke (tran 340)

Exp 310/75.

4387 Dolerite dyke

4388 massive pyroxene gneiss

4389 Garnet gneiss (+ knolls?)

The islands further west are much rather
massive — brown pyroxene gneiss
(- like Target Is type?), with
a few white pegmatites (cross-cutting,
undeformed). The layering is very
irregular — many tight fold axes,
trichloral (interfolial) folds etc.
No ^{basic} dykes seen on these islands.

28/1/77

Newman Ncks W of ...

both massive reddish purple ...
feldspar with interstitial ...
... green feldspar

The layering is rather indistinct
(much more is than ...)

4390 massive, characteristic purple ...
... green

mt Kjerringa - main peak

mainly v massive dark purple
? purple ... feldspar (part retrogressed
...). Some fine grained grey
... green. A nod of

Sapphirine, phlogopite crystalline
... present

4391 massive acid green

4392 mafic green (?)

4393 Sapphirine / phlogopite

4394 Sapph / phlog / cord? etc

A layer of thin white, silty green
(not very green) green sandstone,
blotchy of fine grained material.

NK 4 mls S of Mt Kyerringa

Well layered green, dip SW at 70,
and some thin white dykes (and of course)

Spot Aker Peaks - Spot HT 1560

Massive red green - chamoetite

Dip difficult to determine

Green looks fresh, in contrast
with local locality.

4396 Massive chamoetite green

Spot HT 1600

Massive reddish green and has
probable magie dyke A few ^{thin} light
layers visible

Spot HT 1490 is similar red
green

Spot Height 1490

(K of 2) Send

Massive red grass is apparently
similar to last locality

4397. Massive charnockite zone -
4398 (1 mass) charnockite zone with
rare granite

4399. Retrogressed zone, pyroxene
replaced by chlorite etc.
Dip 315/60°

The zone is massive, but there
are layers of ^{pyroxene} mafic igneous etc.
Gard - present locally but does
not appear to be very abundant.

Pegmatite layers and segregations
(mostly of feldspar quite common
and are ~~the~~ locally discordant

The zone is grey or whitish

Some layers of pyroxene are
retrogressed, pyroxene replaced by
chlorite etc. The layers are con-
sistent with the zone (apparently
due to alteration). Some pyroxene layers

of pyroxene are also present.

Spot Ht 1470

Red massive mass, poorly layered
Dip ~ W at 70°.

Jennings Bluff - ridge near Summit

massive red weathering characteristic
massive dip 60°/SE
massive red weathering characteristic green

Nicholas Range

Red massive characteristic green
diffuse
A few more red layers in the deposit.
Dip ~ 290°/25°.

Spot Ht 1140

Red massive characteristic green
with thin layers of shale
(green in color in this area)
Dip ~ 290°/35°
Green massive; poorly layered

Small NCK 2 mls NE of Spot HE 1140

(near end on S side)

massive reddish chromitite gneiss
similar to last localities. Very
massive - well crystallized
(faintly crystalline)

Some mafic spots (irregular
and central) numerous (some
of these are irregular and discontinuous)

4801 massive chromitite

4802 massive chromitite

(faintly crystalline)

Spot HE 720 (7 mls NE of last)

Red massive gneiss, part similar
to last locality (irregular
under magnification)

Nck 9m SE of last (Flyspeck NE)

Massive pyroxene gneiss -
chlorite (grey) - lighter color
than previous sample
Some high pyroxene gneiss
layers up 20/25

4803 massive pyroxene gneiss

Spot Height 500 (US 2110) (Rypan)

Pyroxene gneiss - rather massive,
but some acid flows. Curly
marly veins and granitic veins
There is no very distinct foliation
but the rock has a slight
slip-sense direction.
4804 mafic pyroxene gneiss

Rypan 0° 1815

Baro 265 750
970.05 969.48

Georges Islands (Edward VIII Gulf)

Small ... of ... island

Very magnesian ... green
with abundant mafics.

4805,6 ... green

4806,7 Biotite gneiss

4808 mafic gneiss (px or amphibole?)

4809 mafic pyroxene granulite (?
a possible dyke)

4810 Ven of pyroxenite (pos.
discordant)

The gneisses are lower grade than
those to the ~~west~~^{west} - somewhat more
magnesian. Inclusions are the usual mafics of
the gneiss (amphibole to amphibole
though amphibole also present
in some of the mafics)

Blocks of ... mafic gneiss
are enclosed in a ...
... mafic matrix

The whole complex looks

3rd - pyroclastic ...
folded with complexly folded migmatite
zones - megacrystic - dikes & veins
highly variable. Shear common - plates green

Georges Island - S of main Zealand

- 4811 massive leucocratic gneiss
 - 4812 Qtz field zone, white?
 - 4813 metamorphosed basaltic dyke
 - 4814 high dyke of ...
- Some of the ... gneiss
in central zone

Mostly rather ...
with poor ...
... - less ... than
other island, but ...
... . Cut by several
metamorphosed basaltic dykes (several
meters across) - rather speckled
appearance with large ...
... . Met ... looks
similar - at ...
... , like ...
Some of the gneiss is very strongly

The dykes are little deformed, but
possibly sheared locally. They
~~are~~ ~~seen~~ ~~not~~ in place in the
dykes.

~~Pegmatite~~ (small)
Pegmatite rocks are rich in
corundum, quartz, possible magnetite,
spinel and feldspar. Spinel is
quite abundant locally in the
gneisses. Pyroxene is
also present (a thin vein or layer)
The feldspar in all the rocks
are white - there is a dark
coloured feldspar of charoakite.

Obachnaya ~~11.42~~

end of ~~the~~ ridge

Baro

11.42

-10°C

265

750

P21.43

P21.30

MT Sibiryakov ~~NNE~~ (E NNE)

Simpson PK R9, 0164

① Rel. low grade migmatite gneisses
(similar to Nye Mts etc)

Massive, foliated acid gneiss
with ~~isotopic~~ [±] gneiss is probably
intrusive, although it is locally
deformed. A large area of
massive biotite rich rock may also
be an altered intrusive.

Layered migmatitic gneisses
include biotite, garnet/kyanite gneiss
trachic layers and ~~quartz~~ hornblende
or ? amphibole [quartz not identified but
may be present].

The gneisses include many pegmatitic
segregations and layers of

shd. are absent. Granite lenses
and quartzite foliated gneiss layers
are also present.

Minor isotropic and plastic folds
are also common. Shear zones
are abundant - are both concordant
and discordant.

1) mafic dyke is discordant, but
deformed and metamorphosed.

Cross cutting pink biotite pegmatite
is present, and some are deformed
(others are deformed pegmatitic
zones)

They have xenoliths
of gneiss. Width from a few cm to metres.

Exp 200/60

4601, 2 massive biotite ± garnet granite
(~~W. schistosity~~)

4603 Biotite rich acid? intrusive

4604 metamorphosed dyke

4605 mafic gneiss

4606 granitic gneiss

4607 Biotite gneiss

4608, 9 garnet biotite gneiss

... some pink granite intrudes the
isolate rich intrusion and appears
to be discordant. It is locally
deformed.

Simpson PKR 8, 1208

Mt Humble

about 1/2 way down

①

mountain on ridge

mostly, red-weathering, rather massive
of field grass with some scattered
psammite vegetation, various
fresh dolerite dykes.

The dyke is 02/75 - the steeply
dipping gneisses are locally
quite strongly deformed with
development of much biotite.

The dolerites are quite fresh
(there is no evidence of
deformation in the dykes)

4610, 1 massive charoekitic (? pyroxene)
gneiss

4612 Deformed and gneiss with
biotite

4613 Dolerite dyke

② Pendleton

Similar massive charnockitic gneiss
locally deformed with extensive
development of biotite. Pp 005/75

Some undeformed gty / feldspar
with pyroxene altering to biotite / or
amphibole (Spec for XRF)

Quite few fresh diabase dykes

A thin dyke is undeformed, but a

10m dyke is sheared at the margin

(It looks fairly fresh, however)

Major 2 pyroxene granulite is
also present

The charnockitic gneisses are
generally rather altered - the colour
is sh. purplish and the feldspars
not as dark as usual.

4614, 5 massive charnockitic gneiss

4616 major granulite

Dick Peaks

Impress PK R? 182

- ① Deeply dipping massive red
characteristic gneiss with basal
deformation locally - development
of kinked etc (The deformed rocks
are quite fissile)

Some grey rather altered rocks
and some more mafic gneiss (quite
massive here).

Cut by a massive dyke (lighter
grey than most dolerites) - trend

340° Appears to be cut by
a typical dolerite dyke (but
relation not certain) Another
fresh dolerite trends ~~340~~ 290°.

Most of the gneiss was originally
massive - coarse grained pegmatitic
zones are common and the mafic
content is high small

- 4617 massive characteristic gneiss
4618 massive acid gneiss
4619 grey mafic dyke

Mt Dyke

Simpson PK R8, 1213

① massive reddish charnockitic gneiss
 with minor mafic gneiss
 Retrogression locally - often
 accompanied by bleaching.
 The retrograde gneisses ^{etc} have
 a well defined foliation and
 there is extensive development of
 biotite (and amphibole in the rocks)
 Biotite dyke in white
 charnockite particularly at the
 margins (the gneiss is also
 strongly deformed here)

4620 massive charnockitic gneiss

4621 pyroxene granitoid

NEK 2 mls W of Mt Dyke

②

4622 massive charnockitic gneiss

4623 mixed mafic gneiss (grey)

4624 Biotite dyke

massive reddish charnockitic

gneiss with some mafic pyroxene

light gray (massive) and
zones are interspersed
pieces of pyx → kerat etc)

Dips are moderate ($\approx 30^\circ$), directions
variable (SE to NE mostly)

Dip near Landing site is 30/30
Dolerite dyke (≈ 20 ft wide, across)
intrudes the gneiss. The dyke
is fresh and contacts appear to
be undeformed.

30/1/77

Mc Hardy - W dip on beach!

Mc Ruer - Loren R15,0707

- ① Dip 190/25°
and Rather massive, kerat^y impure
l. ss, pyx and sa pyx quartz
Mud color sand pyro-titic
layers and quartz (black gl^y)
Some mafic pyroxene granular
layers and inclusions.
To S of beach massive feldspar
pyroxene (e.g. orthoclase?)

The ?amethystite is very massive
with some small inclusions and
pyramidal layers. It is tabular

... dark green
 pyroxene. A more melanocratic
 variety is finer & even-grained
 Immediately underlying this
 are cream-colored sapphire
 bearing rocks (the thickness is
 10m) — red light blue is
 dark blue sapphire, pale milky
 quartz, creamy? feldspar and
 some brownish hypersthene. Some
 layers are richer in hypersthene
 and have darker? feldspar and quartz.
 Associated with the sapphire-
 bearing rocks are some layers
 with deep red garnet (leucocratic)

basic

A wide (25m) dyke is relatively
 felsic (more feldspar than the average
 diabase) with elongated prisms
 of? pyroxene (or amphibole). The
 dyke trends 040 and is massive
 and unfoliated — there is some
 alteration of the country rocks

well foliated gneiss with kyanite
in these zones).

A typical dolerite (black)
tends 100°, but the relations
between this and the other could
not be seen.

- 4625 mafic dyke
- 4626 mafic dyke (fine grained)
- 4627 Same as quartz feldspar gneiss
- 4628 Porphyroblastic pyroxene
feldspar rock (?) anorthite
- 4629 Even grained, more melanocratic
pyroxene feldspar rock
- 4630-2 Sapphirine qtz feldspar rock
- 4633 Sapphirine qtz rock

3/17/70
13-1
-140°

510 985
86362 86377

Maruff Peaks (Hansen MK5)

Base of cliffs near NW end.

Strongly zoned brown and light coloured
gneiss - rather contorted

generally steep dips (200/80)
(Whiting MK generally similar ~ EW strike)

Masses are garnet and biotite
+ qtz + feldspar.

Inner ground, relatively biotite
(+ garnet) rich mass is interzoned
with leucocratic garnet/biotite gneiss
and white garnet + qtz + feldspar
gneiss. Low discordance

pegmatitic veins with biotite: garnet

4634 garnet biotite gneiss

4635 garnet biotite gneiss with
red mafic layers and white garn. qtz feldspar

4636 coarse grained mass

biotite-garnet qtz feldspar with brownish feldspar

... possibly be
massive, and is a conformable,
foliated layer.

Fram Peak

It appears similar to Maruff
peaks, - a layered sequence with
light & brown bands - much contorted
(light folds etc). Cut by grey
(? dike) - discordant, but could
be metamorphosed. The northern (NE)
side has layers of massive red
quartz - could be granitic veins, but
they are folded and presumably
metamorphosed. Dip is N at 45°.

Secluded Rocks

Highly migmatitic gneiss (? diopside or amphibole)
of feldspar gneiss - numerous
pyroclastic layers and segregations with
inclusions and layers of fine
grained, more mafic gneiss/diopside?
and ? diopside gneiss.

X cutting pyroclastic have similar

dyke ~ 5 in thick

is discordant on a gross scale, but conformable in detail.

It presumably represents a metamorphosed dyke although the contacts are gradational. The mineralogy is feldspar + ? amphibole. Locally there are concentrations

of epidote in the gneiss.

Undeformed & cutting pegmatite (pink feld, qtz, garnet, ? biotite) are younger than the dyke.

Dip is roughly NSE at 45°

4637, 8 Garnet ? chlorite qtz feld gneiss

4639, 40 metamorphosed dyke (? amphibole)

Short Mountain

metamorphosed pegmatite qtz feldspar
... containing white mica
... hornblende
... garnet and muscovite
... amphibole

... of ... metamorphosed
... on a large scale they
... the ...
Much of the felsic gneiss was
... contains
blocks of mafic granulite.

- 4641 Acid pyroxene gneiss
- 4642 Pyroxene gneiss (? intrusive)
- 4643 mafic granulite (possibly
a metamorphosed dyke).

12/1
mid temp bar

510	985	10.44
861.63	861.86	-17°C

Targe R3/2153

Forefinger Point towards sea ward

①	985	510	-3°C
<u>Barol</u>	980.40	980.08	13.05

Strongly lateral processes -
 granitic gneiss (massive, porphyritic
 & dyke-like intrusions), garnet gneiss
 field gneiss, biotite gneiss, foliated
 gneiss, mafic gneiss (amphibolite or
 hornblende gneiss), quartzite, etc.
 and various metamorphic
 rocks / gran / biot / cord / hyp / quartz
 etc.
 Some fossils (boudinaged) etc.
 ? some mineral inclusions,
 amphibole, hyp / quartz, garnet
 and biotite etc.

- 4644 granite gneiss
- 4645 biotite gneiss
- 4646 major gneiss
- 4647 pyroxenite
- 4648 Archean. biotite gneiss
- 4649-55 Plummery rocks

The rocks are cut by pink
 biotite pegmatites (unfoliated) & probably
 by pink granite (also sparsely veins in
 pyroxenite.)

Outcrop N of Geoffrey Hills

Simpson PK R3, 1581, 1580

① Red massive charnockitic pyroxene
 gneiss with some layers of
 major gneiss - similar to E
 Massena Mts
 Some spots of hornblende
 and of biotite pyroxenite
 also in some spots - common
 top 15/45



Simp R4/1515

① Geoffrey Hills - ...

Barol	510	985	15.35
	953.05	953.25	-200

Similar to last locality —
 red, ... green
 well made granules and
 a little of light green
 Ca carbonate of field garnet green
 Dip 010/50.

Much steeper, particularly
 in the ... dip
 is ~340/60 (direction 050/25)
 Some pyroxene also present.
 Trend ...
 150° and 10° (the latter subparallel
 to the ...)

...
 ...
 ...
 ...
 ... probably ...

... and the position (light
 ... interfolial folds) —
 particularly parallel to dyke
 margins, although some dykes are
 sheared out and disrupted
 (the 150° trend was back to less
 deformed)

4657, 8 massive charnockitic gneiss
 4658 Barite dyke

Nbk 5 Km WNW of Smp 25/1418
Mt Yuzhnaya — ~~near Mt Yuzhnaya~~ (near W side)

①	Barol 510	985	16.49
	968.45	968.70	0° C

Highly migmatitic gneiss/kiortite and
 gneiss/ki/ sillimanite gneiss.

V. irregular layering — contains
 numerous pink ~~at~~^{bi and} gneiss/ki pegmatite
 and white gneiss/kiortite pegmatitic
 segregations — approaches
 granitic locally. The pegmatitic
 material is often quite foliated

granulite with biotite) and pyroxene
N. leucocratic, light pink granite
→ abundant and there are
more inclusions near the margins
of the mass.

Large X cutting pink biotite
pegmatites are also present

Dip is highly variable, but
roughly 40° to on the W side

- 4660 Pink leucocratic granite
- 4661, 2 Garnet biotite gneiss
- 4663 Garnet biotite sill gneiss
- 4664 mafic gneiss

The dips are variable in different
parts of the outcrop, but are
mostly moderate to steep. The
beds are slightly more
likely to be vertical, but are still
highly variable. The dip is
likely of the order of 40° to

mt Lira

Work pebbles gneiss
with sillimanite cordierite garnet, biotite
-/- hypersthene.

Dips to E at ~50° Cur

by pink EW biotite pegmatite
and some massive white to
pink pegmatites with ^{cores of} ~~cores of~~
massive quartz. These pegmatites
have biotite and large Xlsg
cordierite.

4665 Garnet biotite sillimanite
cordierite gneiss

mt King

Baro 510

985

21-33

862-15

862-57

-13°c

Proclamation Island

town

4666-72 massive charnockitic
gneisses from area between
summit and SW end of island

4673-5 massive ^{purple} charnockitic gneisses
from summit area.

4676 massive granitic gneisses
from near summit

The gneisses are cut by thin
qtz veins and pink pegmatites (~~with~~
~~spinel~~ ~~in~~ ~~the~~ ~~veins~~)*. Locally they are
sheared and become quite strongly
foliated in these zones. The pegmatites are
~~apparently~~ affected by at least some of the

[* Blue qtz, pink-feldspar and black
orthopyroxene]

shears and also some alteration of
pyroxene to biotite; however ^{some of} the pegmatites
cut ~~rather~~ ^{relatively foliated} ~~the~~ ~~gneisses~~ and are not
themselves strongly foliated.

Vechny Hill — NE of melt lake,

NE of main Summit

Very massive biotite granite gneiss
(pink) with rare garnet

Dip 06/60.

Out by 2 generations of pink
biotite pyroxenes (NE later than
SW)

4677, 8 massive biotite granite
gneisses. (NE of lake)

4679 Dikes from N of lake

4680 massive, more melanocratic
biotite gneiss from SE of
lake

To the S of the lake, the
gneisses are more melanocratic,
with some compositional layering.
They range from quite massive to
quite strongly foliated.

Outcrops E of Hays Glacier

~~S. 1/4~~ Outcrop massive reddish brown gneiss

Dip to NW NNE at 60 to 20°. Outcrops
pink pegmatite

There is some layering apparent, but
gneiss is generally massive

N Outcrop Similar, but dip is 60° to

NE. Rocks look generally similar to Vecterny's

Hill. No landing possible.

Outcrops on S side of Assender Glacier

Dip 010/65.

Rather weathered brown gneiss

Light pink massive biotite granite

gneiss in conformable layers (prob.

foliated - brown). Also foliated

pegmatite layers and mafic? pyroxene

granulite layers. Some pink

discordant (unfoliated) biotite

pegmatite - the gneiss on

either side of gneiss is pink

red gneiss.

- ...
 through deformed - well deformed
 granites - ^{pink-ssb} granitic gneiss (but local
 gneisses (HS) ^{hard} as well.
 4681 Brown and green (? pyroxene
 or kyanite)
 4682 Pink granitic gneiss (kyanite)
 4683 High ? pyroxene gneiss.

Felton Head

- Summit —
 4684, 5 massive charnockitic
 gneiss ? pyroxene granite
 4686 Altered granite
 4687 Later grey granite intrusive

Intrusive grey rather holocrystalline
 charnockitic (with garnet - pyroxene)
 rather coarse grained. Locally foliated
 and retrogressed (fine white mica
 colour). Best foliation found on the
 outcrop to the south - no smaller
 intrusive

1.2 miles N. of Waratah
(see the ptz. field notes).

There are also some veins (?) of
very granite - (but relations not
seen in situ)

The outcrop 4 miles S of Teller is
v. massive brownish green (or
intense?) - there are some mafic
schlieren present. Also large
shear zones and some possible ~~veins~~
basic dikes.

The outcrop to the E (2 miles) is

is similar, but there is some composition
change (it is still mostly very massive
however). The small outcrops to the
west are all massive brown chlorite.

The rocks 2 1/2 miles west Waratah Island
is also brown, v. massive rocks,
cut by basic dikes and pink
pegmatites. The outcrops between
Waratah and this point are similar
v. massive intense, with light
coloured schlieren (some of them
aligned).

Outcrop 1 1/2 miles SW of Forefinger Point

(2)

Target from K-2153

Dip 170/70

Direction 100/50

- 4688 mafic pyroxene granules
- 4689 Biotite ? pyroxene grains
- 4690 Garnet biotite grains
- 4691 Chromite grains (inclusion
in massive, foliated leucogranite)
- 4692 Leucogranite (foliated, with garnet)

Thoroughly banded and in some places
biotite, biotite + pyroxene?, garnet
biotite grains; mafic pyroxene
grains and inclusions of
leucogranite. At least some of
the leucogranite garnet leucogranite
is crystalline, but it is foliated.
It ~~contains~~ contains inclusion
of more mafic grains, including
brown chromite grains. Xenoliths
such as biotite, pyroxene are also
present.

① mt Henry

massive reddish pyroxene of 1-1.5 cm
grains (grey in hand 4/5) - some
evidence of retrogression - bright

etc. garnet in some places is present.
The quartz commonly has a tabular
color. Dip 005/65

Cut by a fresh diabase dyke - Loc. 1
005 - undeformed

~~4693~~ 4693 Massive chromite green

4694 massive chromite green
with 100 garnet

4695 Diabase dyke

② Saddle near S. end

Mostly massive brownish red pyroxene /
spineliferous green with a high
proportion of tabular mafic pyroxene
grains, some black pyroxene
and some lighter colored pyroxene
with bright green spineliferous

25-30% quartz is also present.
The processes are cut by
massive pink feldspar/quartz /
biotite/magnetite pegmatite with
Xls up to 5cm in length — they
are locally deformed. Near the
pegmatites the processes are elevated
and re-exposed (biotite)

Dolerite dykes cutting the processes
do not appear to be cut by
the pegmatites (see relations on
see unequivocal). The dolerite
may be slightly altered but
appear to retain an igneous texture
N up 000/near vertical.

- 4696 massive chloriteiferous gneiss
- 4697 mafic pyroxene gneiss
- 4698 Pyroxenite (comparable)
- 4699 Dolerite dyke (see above?)

Gromov NtkP

③

mainly rather massive, but larger
 red pyroxene gls feldspar green
 + mafic pyroxene green - the
 latter is quite abundant at the
 contact spot. Some ultramafic
 in ultramafic layers contain
 quite abundant garnet - the
 mafic green also contains
 garnet locally, mostly near red
 mafic to ultramafic layers and
 segregation, but ^{where is} ~~is~~ typical
 pyroxene/feldspar green (but it
 is less abundant
 but by just olivine/diops).

The processes are quite well
 foliated but are otherwise similar to into Henry

- 4700 Pyroxene quartz feldspar green
- 4815 mafic pyroxene green.
- 4816 Pyroxene feldspar green
- 4817 Pyroxene garnet feldspar red
- 4818 Pyroxene feldspar rock

Dip 35/30

④

Massive chert

Similar to last locality -
 massive chert, pyrochlore, green
 mafic pyrochlore green (locally with
 garnet - especially in more melanocratic
 layers). ^{generally} Cut by fresh dolerite
 dykes - some steep and
 retrogressive along margins. The
 dykes are a grey pink to white
 pegmatite with biotite + muscovite
 muscovite and garnet. There is
 considerable retrogression adjacent
 to the pegmatite - the ^{biotite} green becomes white or
 light grey in outcrop (biotite replaced,
 pyrochlore and/or garnet etc). Some
 of the pegmatites are composite with
 cores of pink to white ^{leucic} granite that are
 relatively shallow dipping.

Dip is 120/20 - just like the
 ... becomes ... vertical and like steeply
 ... in the ... of ...
 ... dip 11W.

4819 massive chert
 * ...

4822 Kolerite dyke (altered from near pegmatite)

Central of 3 small Hks on r/c end

⑤ Dip 000/05 Orientation N20/45
massive brown chloritic greenish
magnesian. The latter is also present
to amphibolite adjacent to a
large (3m) pegmatite (subhorizontal)
The pegmatite contains muscovite,
zircon (some as clasts of very small
Xls) - it is locally deformed, but
is mostly undeformed

4823 massive chloritic greenish
massive

4824 amphibolite from near pegmatite

~~4825 Pegmatite with zircon
clasts~~

Mt King 6.11.77

Baro	510	985	11.00
	864.65	864.85	-12°C

Sump Tea D / 0558

Mt Pardoe - low outcrop on coast

① at W end (W of 2 outcrops)

Mostly fairly well layered iron
pyroxene g₃ feld g₁; rusty brecciated
g₁ g₂ feld g₁; g₂ + pyroxene g₁
more pyroxene g₁; thin pyroxene
(cpx?) layers. The latter have
some g₁ locally - mostly at
cpx / plg boundaries. The g₁ g₂
dip ~ 20/10 (variable) and
are cut by a dolerite dyke, and
pink feld, g₃ / biotite pegmatites (redox zones
and bleaching of g₁ near contacts -
biotite developed)

4825 Same pyroxene g₃ feld g₁

Baro	1	510	985	1310.
<u>Sea Level</u>		995.84	996.12	+2°C

(2)

Pyroxene qtz feld green -
thin grained, little Ca garnet appears,
(could be in some)
Some development of garnet along shear
zones (bulk of rock does not appear
to contain garnet)

Cut by a metamorphosed dyke (80 cm)
(-trend 205) with garnet - undeformed
This is cut by a diabase dyke
(fresh - trend 245)

Dip is ~ NE at a range of angles

4826 Pyroxene qtz feldspar gneiss

4827 Metamorphosed dyke (with garnet)

Sump R13/0419

Priestley Peak (SW end - 0-1-6)

(4) Dip 19-5/45 direction 270/10

Rather massive pyroxene qtz feld gneiss,
with pyroxene gneiss, feldspar
feldspar gneiss and pyroxene
garnet

2000 m thick a deep black red

... (F rock)
 dikes with some garnet ^{in thin veins (3 stories)}. These
 are undeformed and cut the tightly
 folded gneisses

4828, 9 metamorphosed dikes.

4830 Pyroxene granulite (any
 evidence of a 2nd metamorphism?)

4831 Rusty weathering garnet qtz feld gneiss

<u>Bar. 1</u>	510	985	1515
	346.60	946.87	0°C

Samp R15/0694

Mt Trail

Island to NW

①

Bar. 1	510	985	0°C
	991.15	991.37	1543

Strongly layered leucocratic quartzite
 gneiss, quartzite, garnet
 pyroxene gneiss, pyroxenite, etc.
 The pyroxenites have few dark
 black (some with garnet in it) and
 adjacent to (sympathetic gneiss) to
 pale buff - green (ie. per.)

- visible a strong deformation
 Culeby pegmatites along shears
 (or shearing along pegmatites?) with
 garnet & biotite. Volcanic dykes
 look fresh and undeformed.
 4832 "Census water" garnet gneiss (rather deformed)
 4833 garnet pyroxene rock (calc silicate)
 4834 garnet biotite gneiss from shear zone
 4835 Volcanic dyke
~~4836~~ 4836 Major 2 pyroxene granulite
 dykes

The relationship between the ~~shear~~
 and the ^{+shear} pegmatites / not seen. In all dyke
 margins are essentially undeformed.
 The shears have pegmatitic rocks
 only locally; a few ^{thin} interconformable
 small biotite pegmatites are also
 present.

MM	Key		
Baro	510	775	-100°
	263-24	264-25	1935

77070517 Mt Jewell - W pt on C ridge
Mt Cod. Run 15/3085

3862 massive chloritoid p/x Qtz feld gneiss

77070520 Ntk N of Mt Skadler (11 mi) - W Ntk

✓ 3863 Altered p/x Qtz feld gneiss

3864 Qtz rich garnet gneiss

77070521 Ntk NW of Budd Plk

Mt Cod R11/2373 270/45 = Dip

3865 massive chloritoid p/x Qtz feld gneiss

3866 ~~massive~~ mafic p/x gneiss (

77070522 S of Mt Snyder (5 mi) Ntk

Mt Cod R12/2345 095/80 = Dip

3867 magnetite-rich, fine grained rock (layer)

3868 Garnet ? white Qtz feld gneiss (coarse)

3869 mafic p/x gneiss

3870 Leucocratic garn Qtz feld gneiss



